



Montana Department of
Natural Resources and Conservation

Montana Floodplain Management Workshop: Overview





Montana Department of
Natural Resources and Conservation

Montana Floodplain Management Workshop:

Thank You Presenters

Traci Sears

Laurence Siroky

Larry Schock

Mary Gibson

Marijo Brady

FEMA's National Flood Insurance Program (NFIP) is about:

Lessening Flood Hardships



Roundup, MT. 2011. Photo credit Musselshell County

1. Floodplain Management:

Local communities manage development* and activities on floodplains through regulations, approved by FEMA and the State of Montana.

2. Flood Insurance: Individuals in participating NFIP communities purchase flood insurance from local insurance agents.



“Development means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials”.

Brief Background: National Flood Insurance Program

For many years, the national response to flood disasters was generally limited to control methods such as levees and dams.

With mounting flood losses and escalating costs of disaster relief to taxpayers...



Levee holding flood water along the Mississippi River.



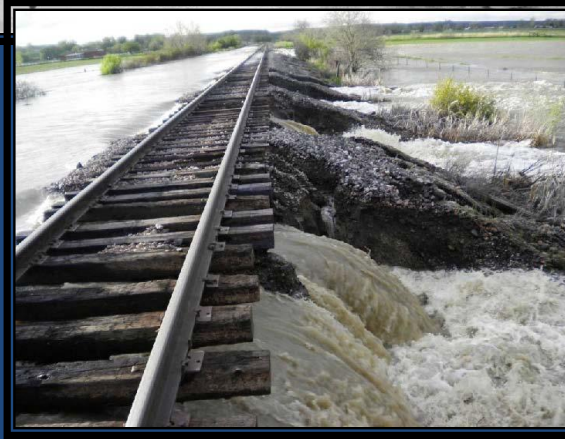
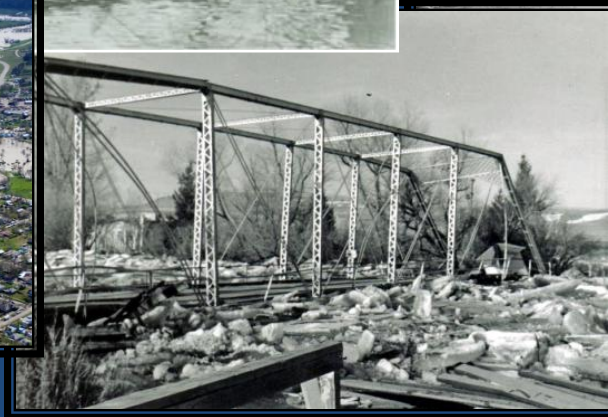
A Mississippi River levee breaks 1993

Brief Background: National Flood Insurance Program



Little Blackfoot River

...The National Flood Insurance Program (NFIP) was established in 1968.



In simple terms,
floodplains are areas at risk of getting flooded.

They may not
appear to be
at risk.



Floodplain near Lolo Creek in Ravalli County.

➔ Direction of flow. Lolo Creek going toward the
Bitterroot River.

But even adding
a “small”
amount of
water can put
them at risk.



Same floodplain as previous photo with “water added”, during a 10-year flood event, a relatively minor flood event. May, 2008.



No flooding.



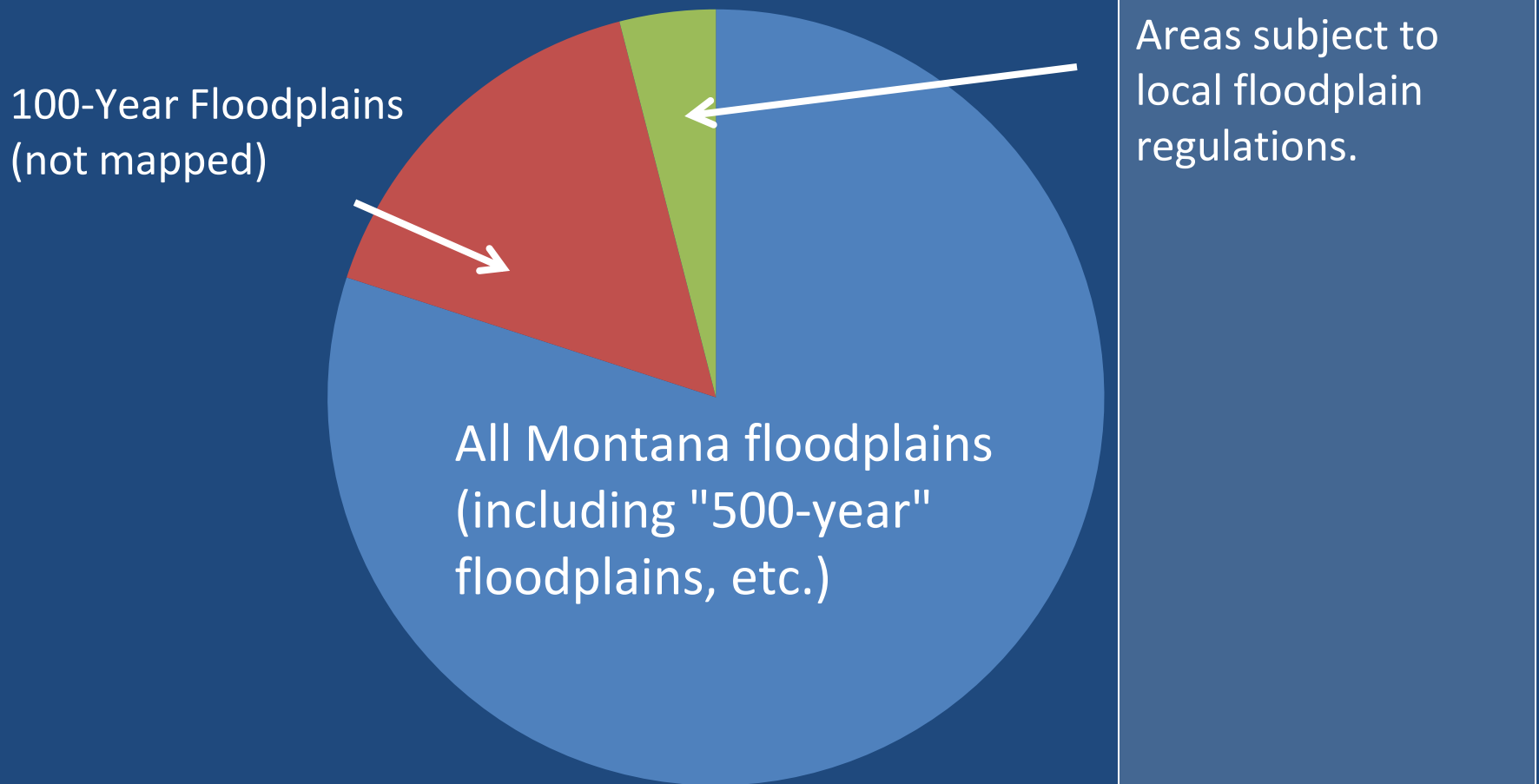
Flooding during a minor, approximate "10-year" flood event.

Depending on the shape of the floodplain, carrying capacity of the river, etc. generally...

A "100-year" flood event (1% chance flood event) would be far more extensive.
A "500-year" flood event (.2% chance event) would be really extensive!

Not All Montana Floodplains are Mapped or Regulated by Floodplain Regulations

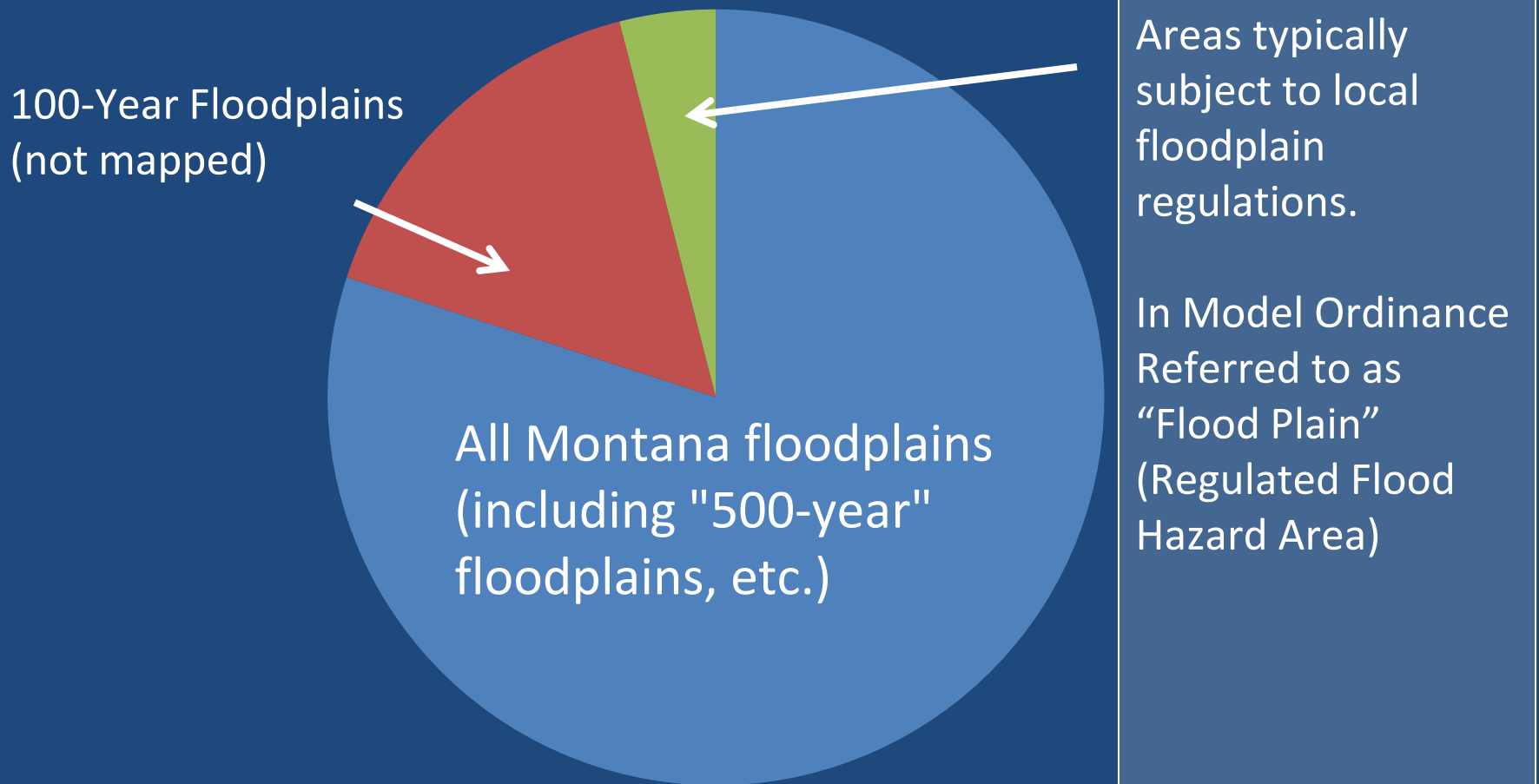
However, other regulations may still apply i.e. sanitation (from county sanitarian) and streambed (310 permits issued by Conservation Districts), etc.



The above pie chart is an estimated depiction.

Not All Montana Floodplains are Mapped or Regulated by Floodplain Regulations

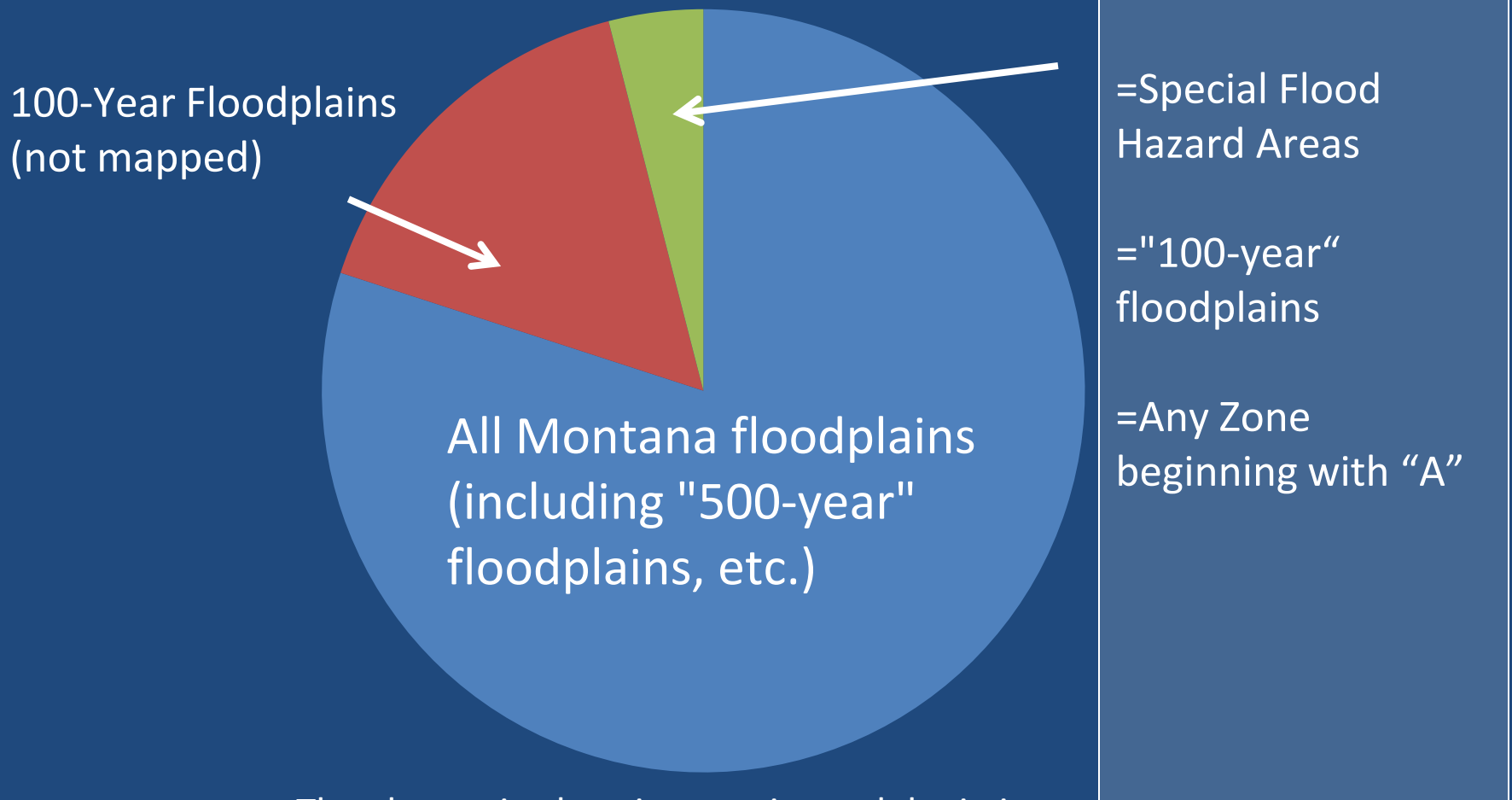
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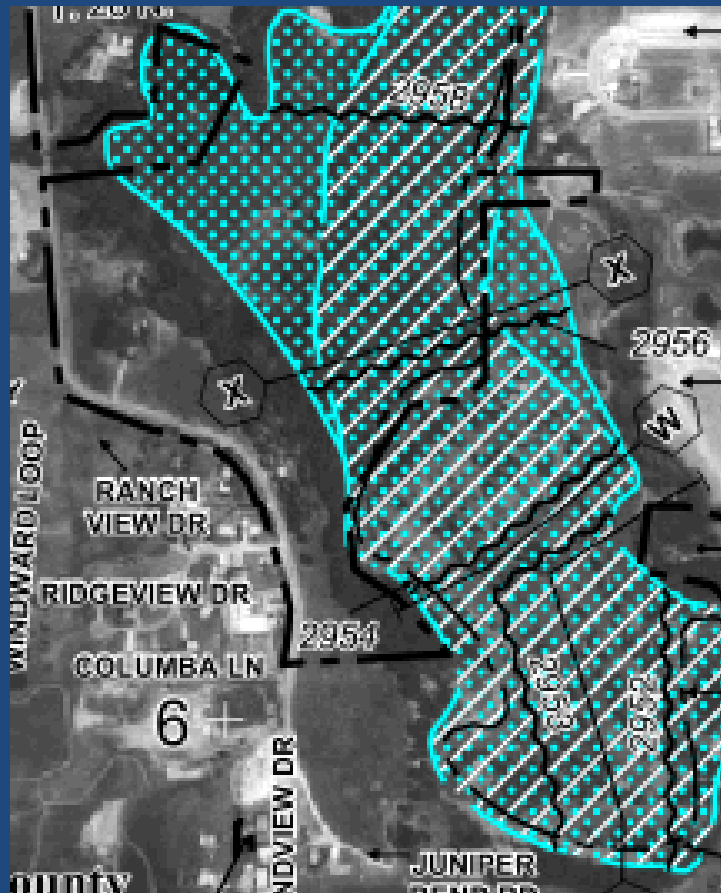


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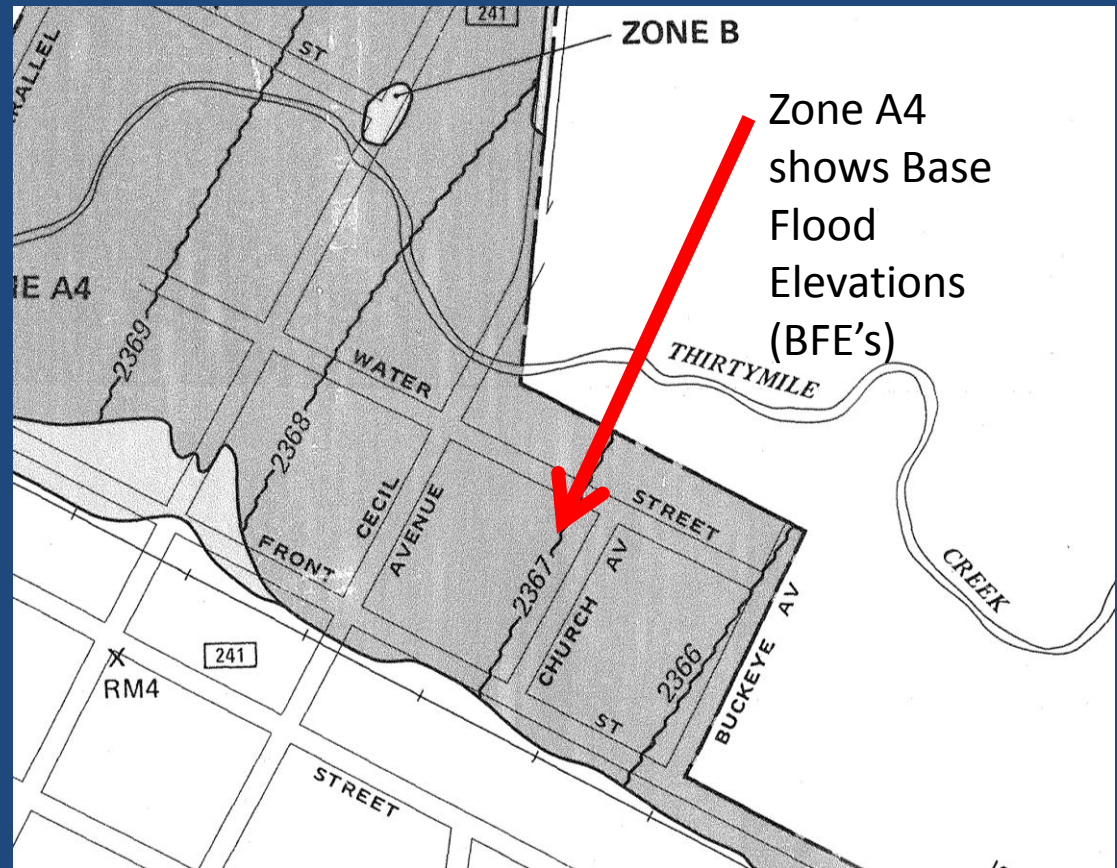
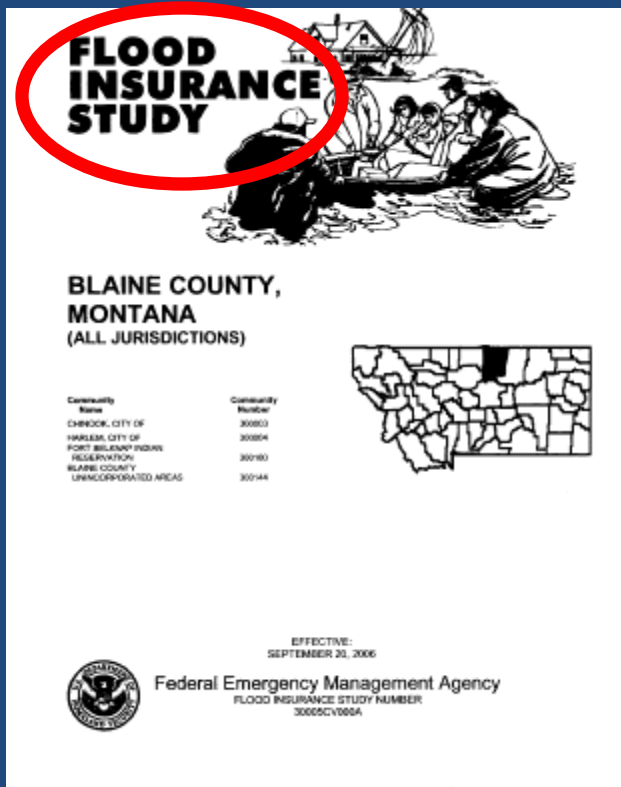
What does a floodplain administrator do if they hear about “development” being planned in a floodplain?





Find out if the
“development” is in a FEMA-
mapped floodplain.

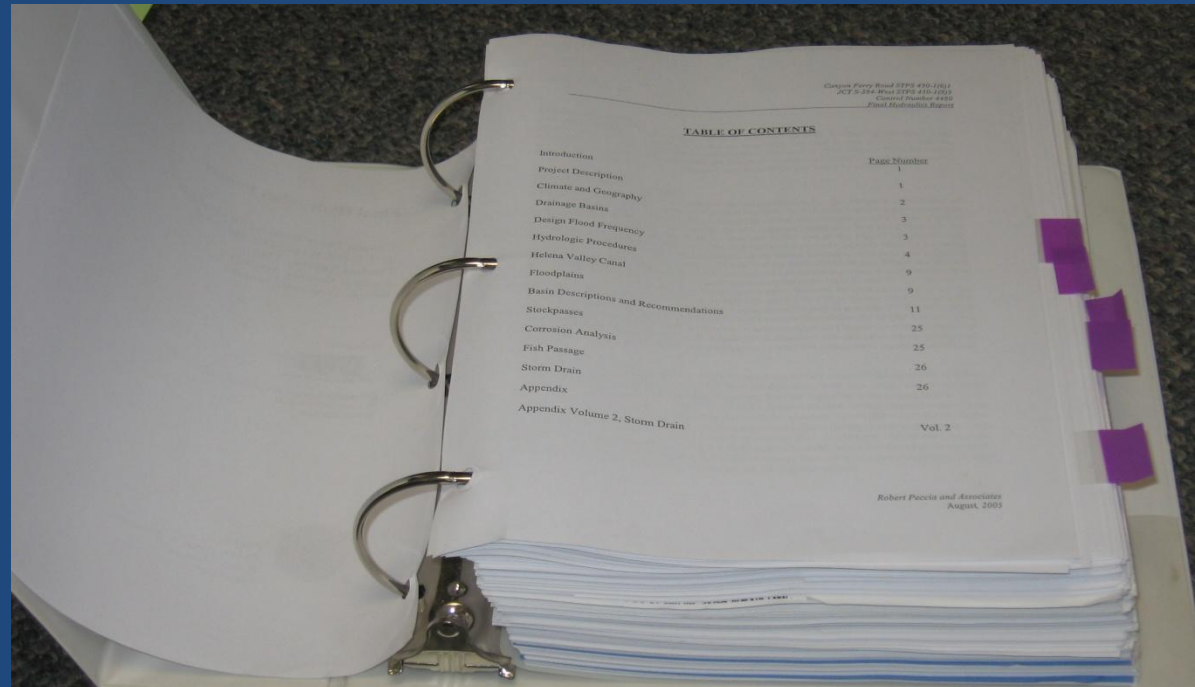
Elevation Matters



Whenever Base Flood Elevations are shown, information is backed by science found in Flood Insurance Studies (FIS).

Elevation data trumps map views when determining whether property lies within or outside of SFHA.

If proposed project or activity is in a FEMA –
mapped floodplain,
allow ample time for permit application and
processing.



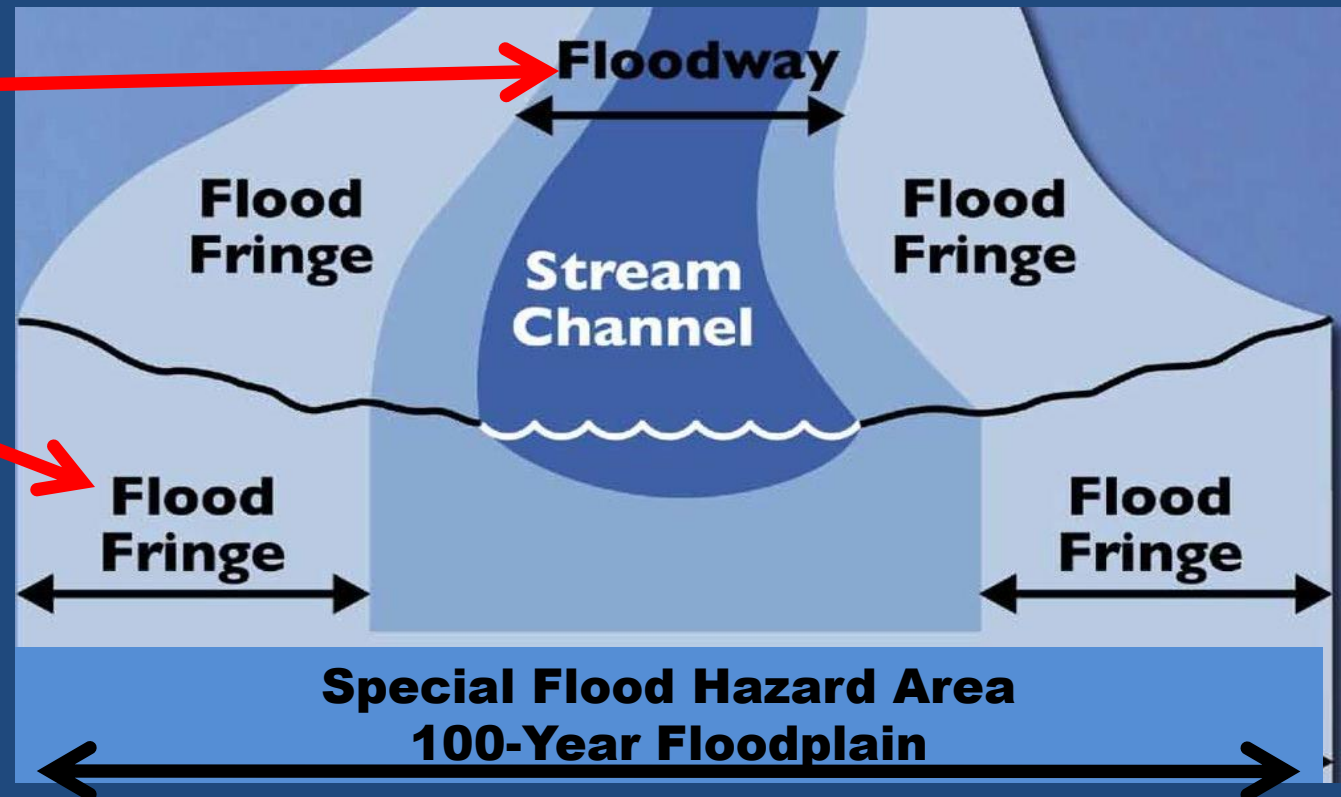
NO. Not all permit
applications are this
thick!

For FEMA Mapped Floodplains

Local regulations generally fall under two categories

1. Floodway
2. Flood Fringe (with or without Base Flood Elevations) and with no Floodway

Floodway is within Special Flood Hazard Area and regulations in Floodway are more stringent than **Flood Fringe**.



SECTION 9. DEVELOPMENT STANDARDS-FLOODWAY

- 9.1 General Standards in the Floodway**
- 9.2 Mining Of Material Requiring Excavation From Pits Or Pools**
- 9.3 Railroad, Highway And Street Stream Crossings**
- 9.4 Limited Filling For Road, And Railroad Embankments**
- 9.5 Buried Or Suspended Utility Transmission Lines**
- 9.6 Storage Of Materials And Equipment**
- 9.7 Domestic Water Supply Wells**
- 9.8 Buried And Sealed Vaults For Sewage Disposal**
- 9.9 Recreational Uses**
- 9.10 Structures Accessory Or Appurtenant**
- 9.11 Agricultural Structures**
- 9.12 Construction Of Or Modifications To Surface Water Diversions**
- 9.13 Flood Control And Bank Protection Measures**
- 9.14 All Other Obstructions**

Floodway Regulations in Brief:

- Floodplain permits needed for most uses.
- Excavations, stream crossings may be allowed with a permit.
- New structures are not allowed, except small agricultural “lean-to’s”.
- Encroachment reviews are required for projects in Floodway.



In Brief, Uses Requiring Permit Include:



Fill for railroad embankments.



Rip-rap and bridges.



Sewage Lagoon Treatment Ponds.

**SECTION 10. DEVELOPMENT STANDARDS FLOOD FRINGE OR WITH OR
WITHOUT BASE FLOOD ELEVATIONS AND WITH NO FLOODWAY**

- 10.1. Uses Requiring Permits**
- 10.2. General Requirements**
- 10.3. Residential**
- 10.4. Non-RESIDENTIAL**

From Montana Draft Model Ordinance: Feb., 2012

“Flood Fringe” Regulations in Brief:

- Floodplain permits needed for most uses.
- New Structures may be permitted with elevation requirements (2' above elevation of base flood)



Elevated home in Gallatin County. 2008

A couple of Uses Requiring Permits Include:



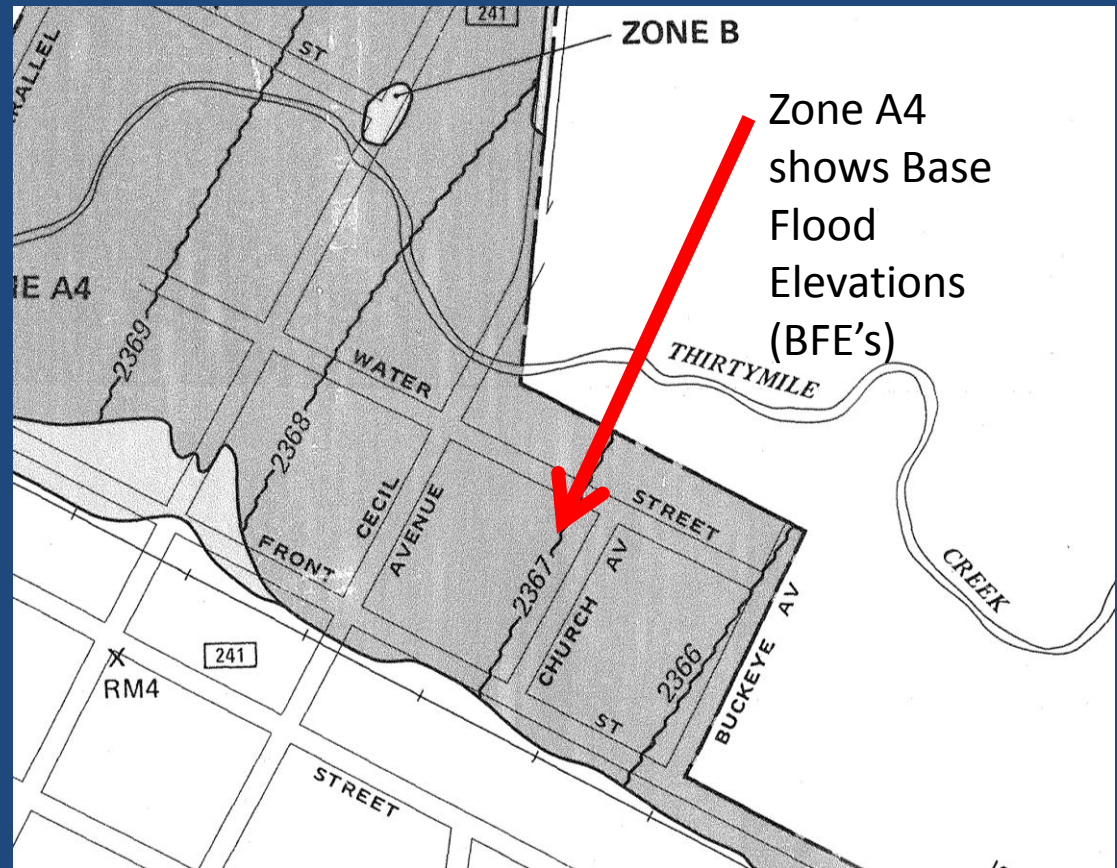
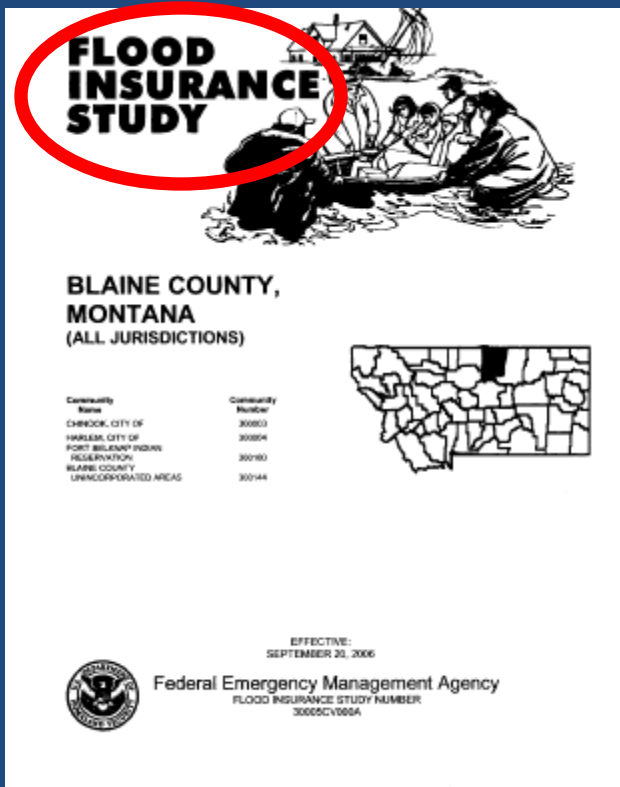
Residential Structures



Structures Undergoing Substantial Improvements



Elevation Matters

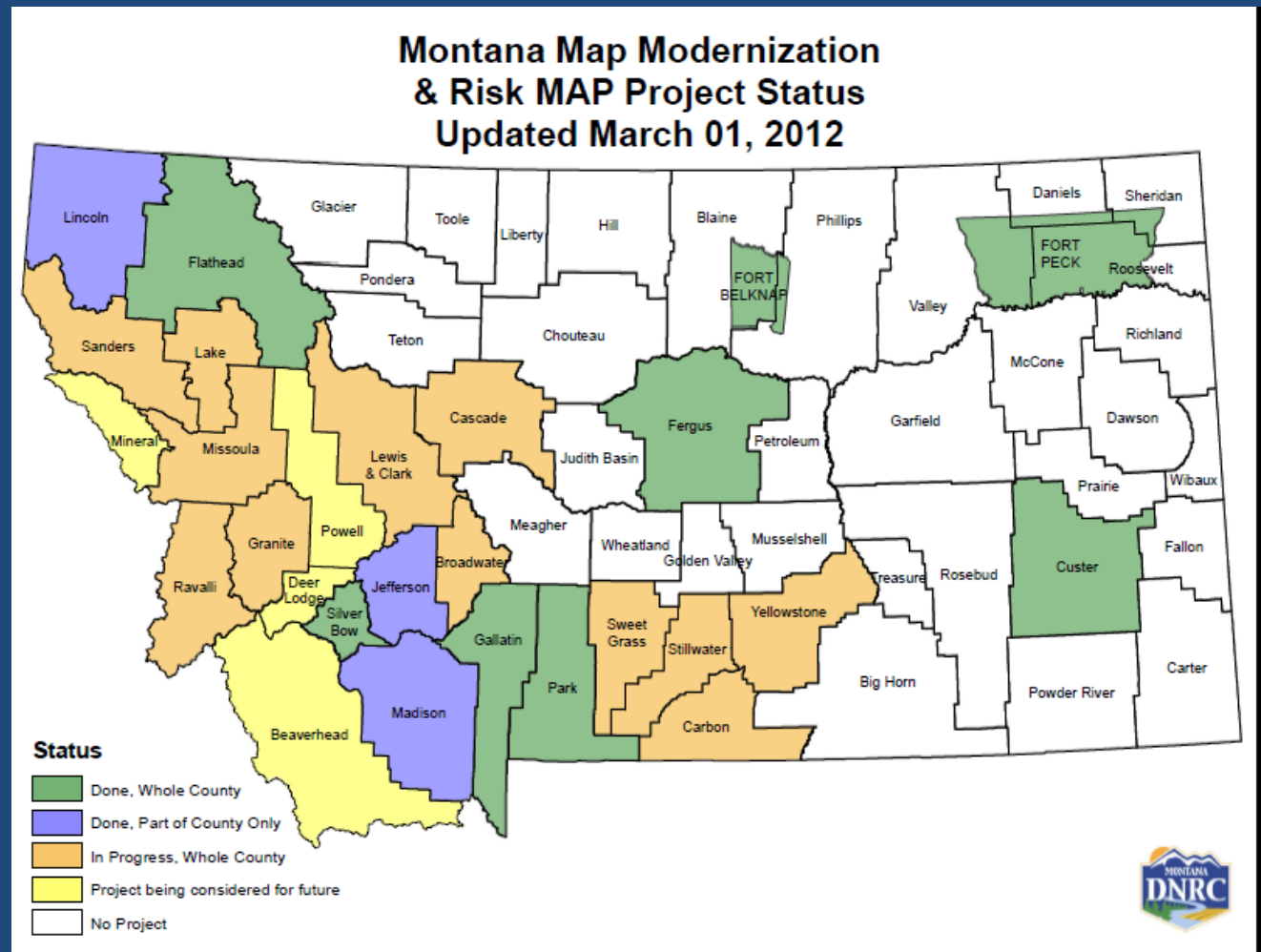


Whenever Base Flood Elevations are shown, information is backed by science found in Flood Insurance Studies (FIS).

Elevation data trumps map views when determining whether property lies within or outside of SFHA.

A Few Things to Consider with Maps

A conversion from a paper format to a digital data has occurred in some counties and will occur in more counties.





FEMA

Map Service Center

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Product Search by...

Address **Map Panel ID**

1) Select a Product:

Flood Maps

2) Enter an Address:

Street:

City:

State: Zip:

[Search by Street Address](#)

New to the FEMA Map Service Center?

- [Homeowners/Renters](#)
- [Real Estate/Flood Determination Agents](#)
- [Insurance Agents](#)
- [Engineers/Surveyors](#)
- [Federal/Exempt Customers](#)

Try our new Live Chat service!

Our staff is available for online chat Monday through Friday, 9:00 am to 5:00 pm Eastern Standard Time (Eastern Daylight Time). Click below to start chatting now:



Live chat by nGenera

Log On

User ID (email address) :

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Announcements

FEMA Orthoimagery Transfer to USGS

Beginning August 29, 2011 orthoimagery for effective studies will be stored at the United States Geological Survey (USGS). Orthoimagery will no longer be available via the MSC, the MIP or the Engineering Library. To access the imagery at its new location use the following URL:

<http://stratus.cr.usgs.gov/viewer/>

Click [here](#) for more information. For specific questions contact the FEMA Map Information eXchange (FMIX) at 1-877-FEMA MAP (336-2627).

What are you looking for?

- [Flood Maps](#)
- [FIRMettes](#)
- [DFIRM Databases](#)
- [MapView - Web](#)
- [Documents, Publications & Forms](#)

More Information

- [Product Availability](#)
- [How do I find the flood map for my area?](#)
- [What is a FIRMette?](#)
- [How do I find a LOMC?](#)
- [Definitions of FEMA Flood Zone Designations](#)
- [Product Information](#)
- [Price List](#)
- [How to Order](#)
- [Need Assistance?](#)

NFHL

National Flood Hazard Layer [\(learn more\)](#)

View the NFHL Online using [MapView - Web](#)

Order NFHL GIS Datasets by state on DVD

Use Web Map Service in your own GIS application

Use Web Map Service in Google Earth™

[Got Comments?](#)

PDF Views
of All
Maps
(Digital
and Non-
Digital)
are found
here on
FEMA
Map
Service
Center.

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Click [here](#) for more information. For specific questions contact the FEMA Map Information eXchange (FMIX) at 1-877-FEMA MAP (336-2627).

FIRMette - Desktop 3.2.2 Upgrade

Update. The Map Service Center now has version 3.2.2 of the FIRMette - Desktop viewer available for download. This new version includes additional features that allow users to search for map panels by address or coordinates, search for and download Letter of Map Changes (LOMCs) for a panel, and print full-size Flood Insurance Rate Maps. You can download it [here](#).

[\(learn more\)](#)

MapView - Desktop 2.04

FEMA has updated its MapViewer Desktop tool for viewing GIS flood data. Significant improvements to v. 1.0 had been made, including support for internet based data and improved geocoding. The release candidate can be downloaded [here](#).

- [Product Availability](#)
- [How do I find the flood map for my area?](#)
- [What is a FIRMette?](#)
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[Datasets by state on DVD](#)

[Use Web Map Service in your own GIS application](#)

[Use Web Map Service in Google Earth™](#)

[Got Comments?](#)

FIRMette Tutorial

Learn how to create FIRMettes. They're free!



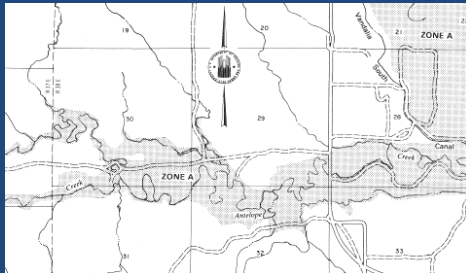
[Click here to learn how to create a FIRMette.](#)

A Few Things to Consider with Maps

FEMA Mapped Floodplains Maps
Flood Insurance Rate Maps
(FIRMs)

Non-Digital FIRMS

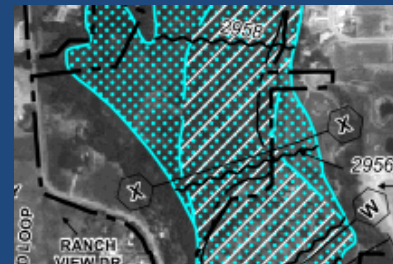
Floodways on separate map



Digital FIRMS (post 2005)

Flood Fringe & Floodway on
same map.

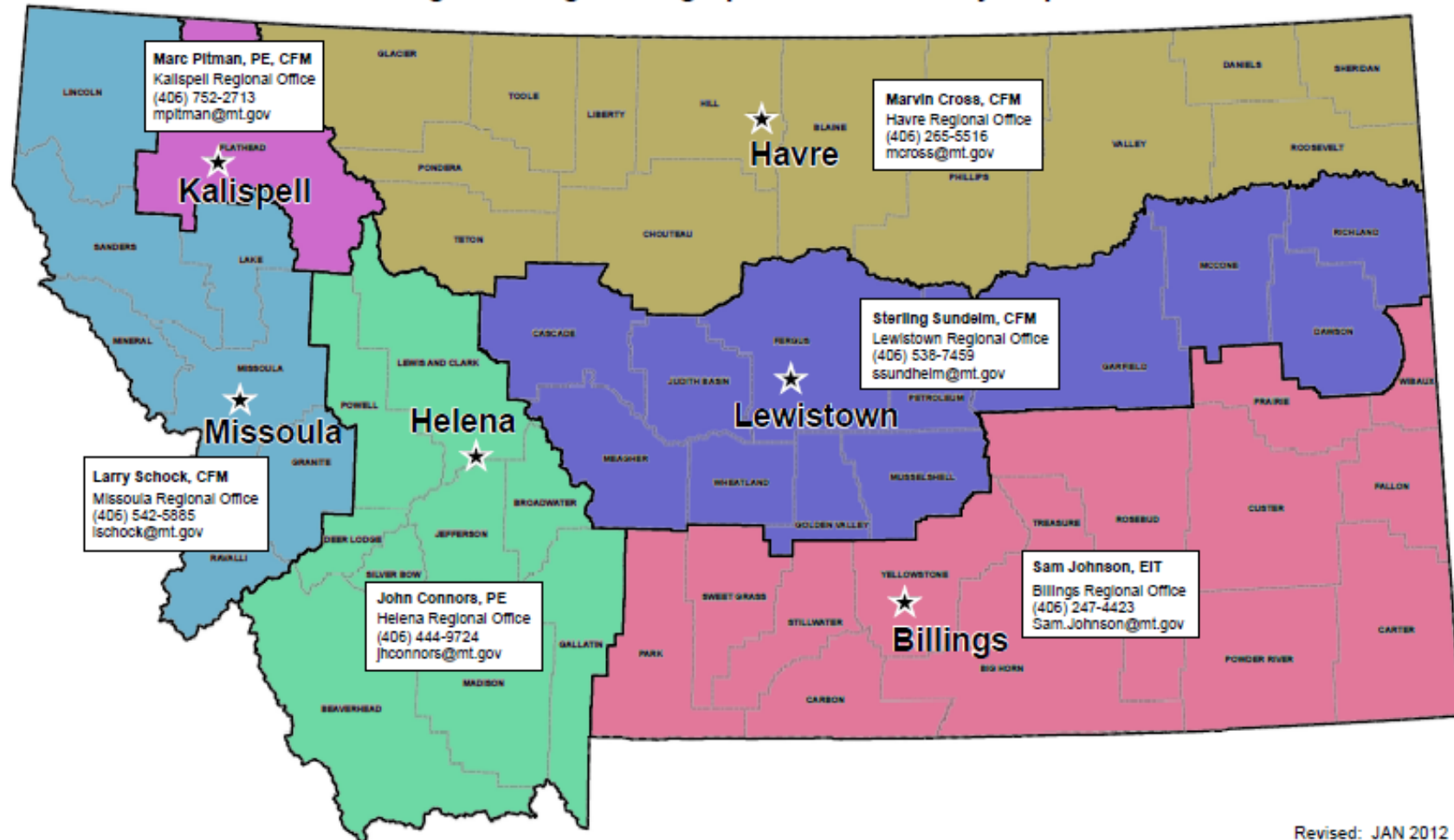
DFIRMs in some MT
communities.



There are many technical aspects to Floodplain Management.

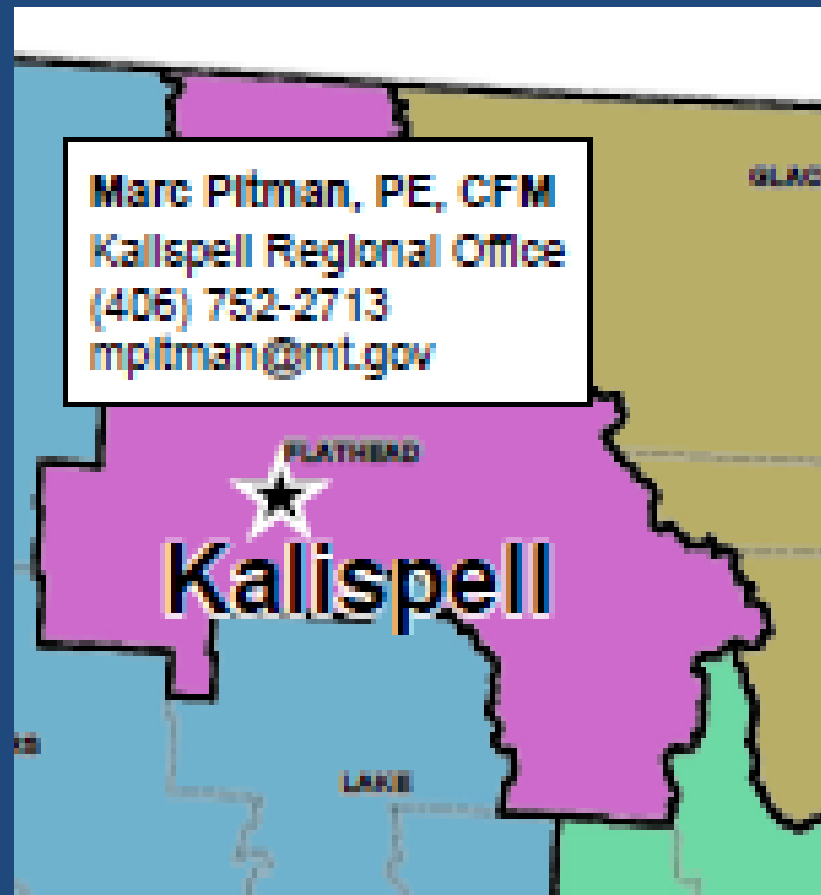
Contact DNRC specialists within your region.

DNRC FLOODPLAIN PROGRAM
Regional Engineering Specialist Boundary Map



Revised: JAN 2012

Marc Pittman, PE
Kalispell Unit Office
655 Timber Wolf Parkway
Suite 4
752-2713



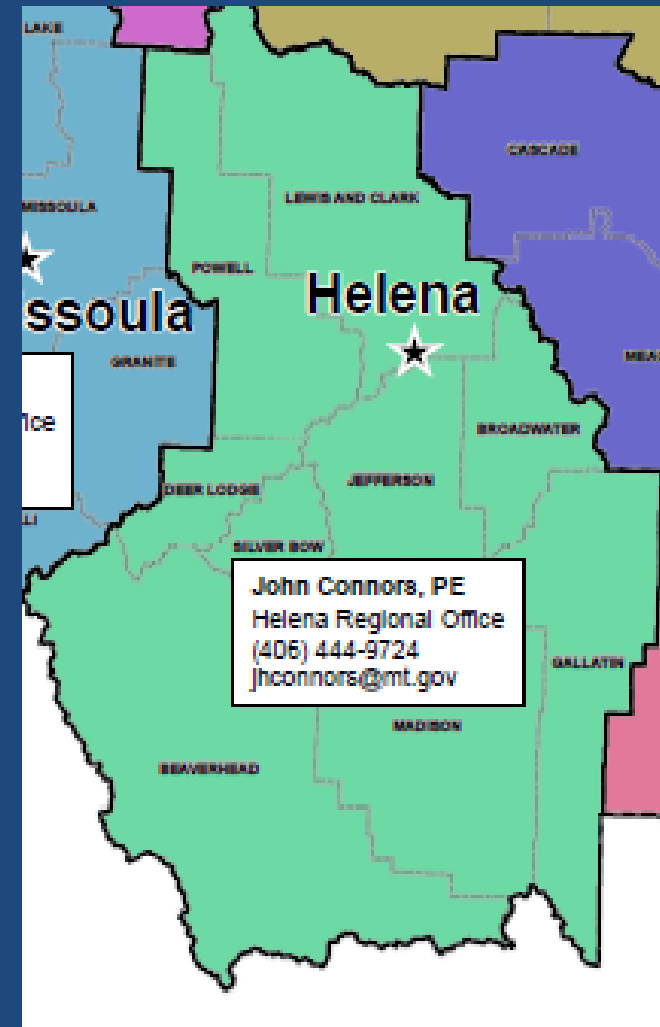


Larry Schock
Missoula Regional Office
1610 S. Third St. W., Suite
103 PO Box 5004
Missoula, MT 59806
721-4284



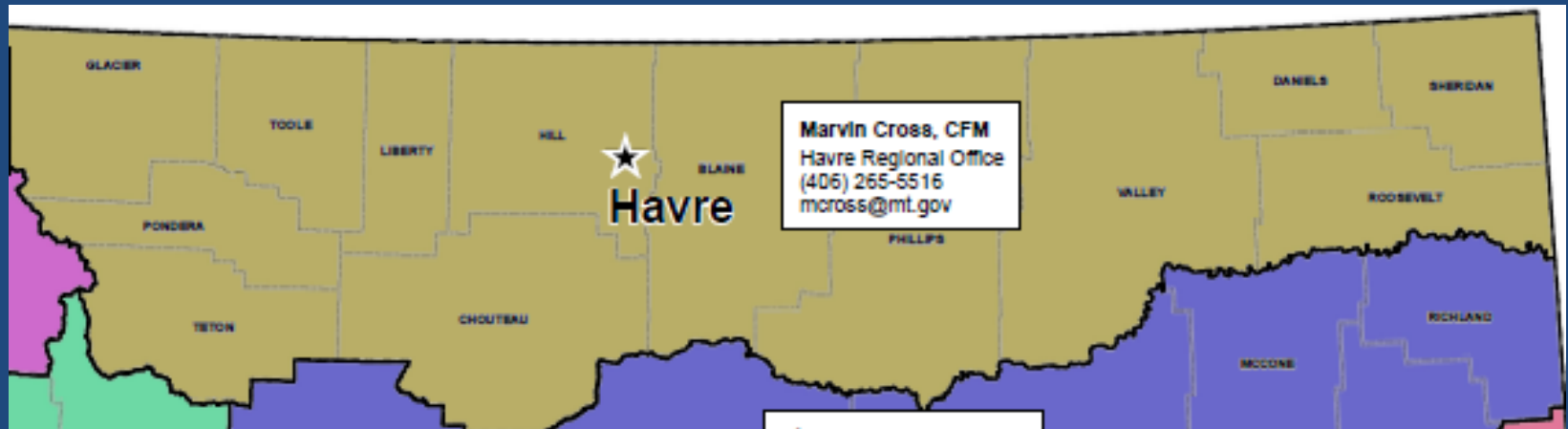


John Connors, Regional
Engineer
Helena Regional Office
1424 Ninth Ave.
PO Box 1828
444-9724



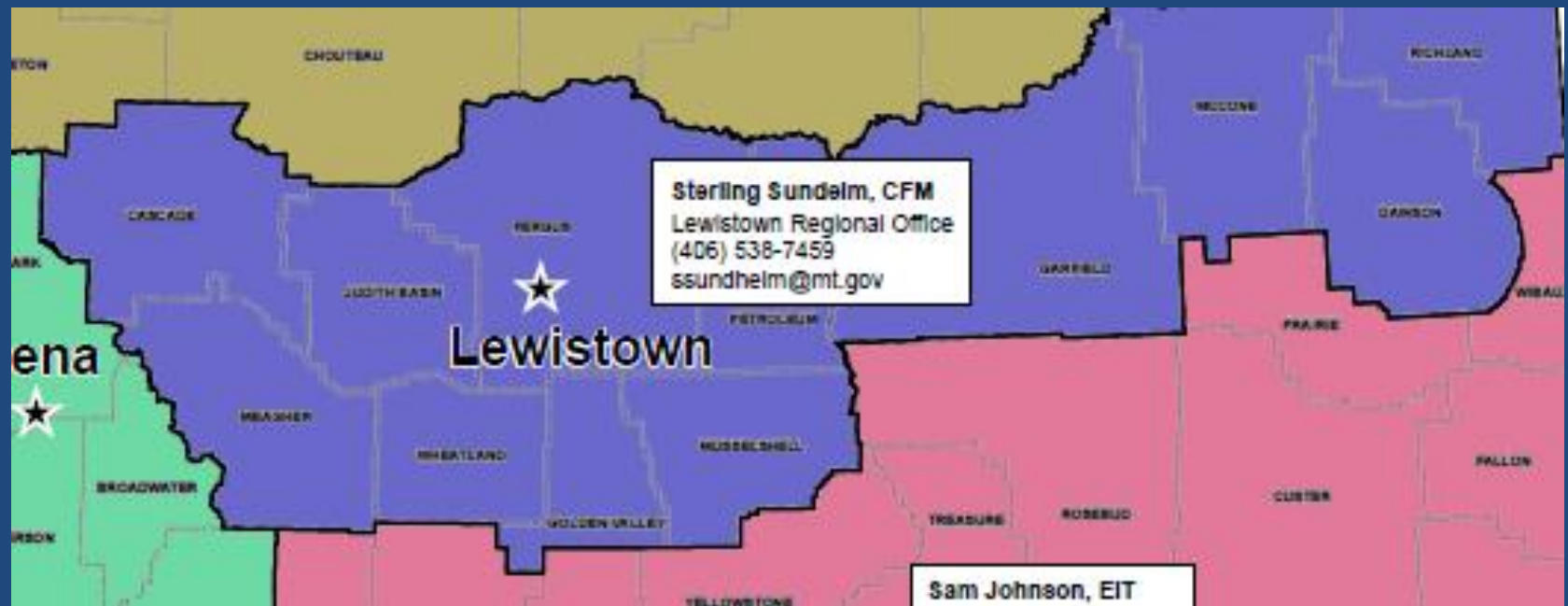


Marvin Cross, Regional
Engineering Specialist
Havre Regional Office
210 Sixth Ave. PO Box
1828
Havre, MT
265-5516



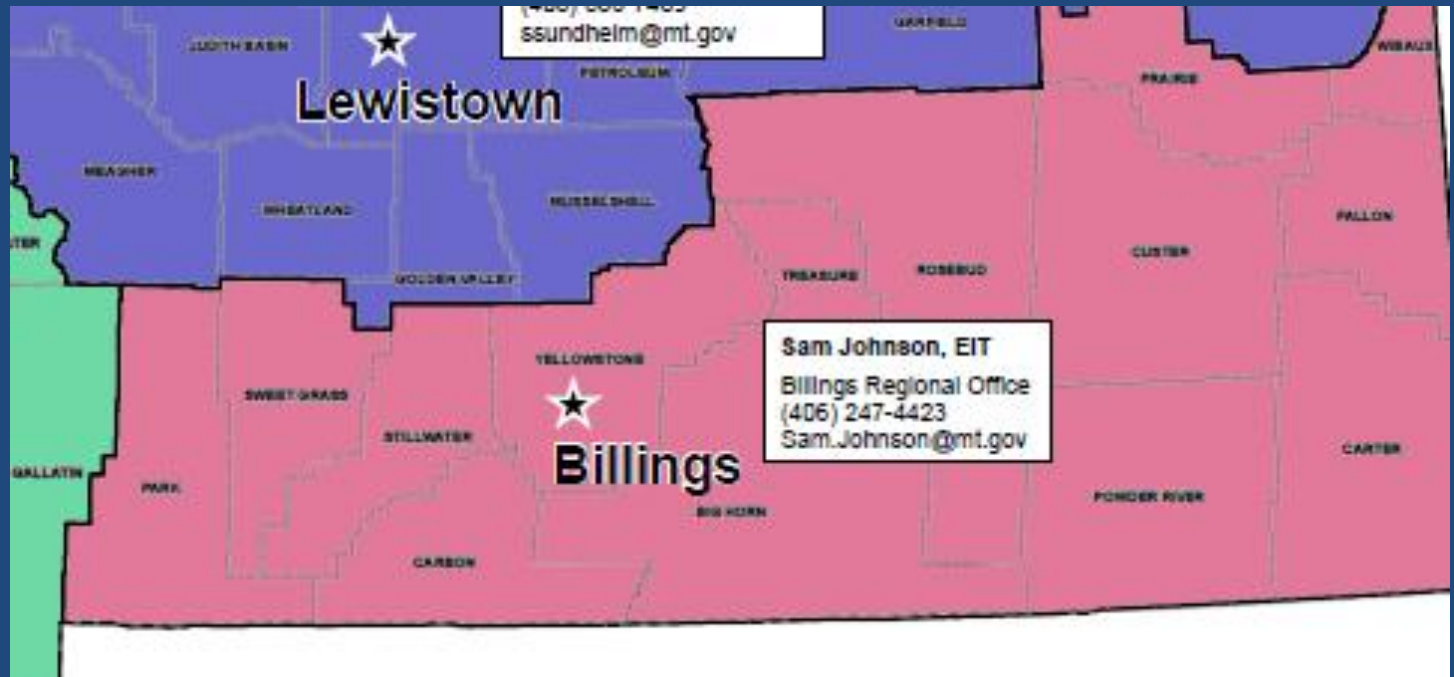


Sterling Sundheim, Regional
Engineering Specialist
613 NE Main, , Suite E,
Lewistown, MT 59457
538-7459





Sam Johnson, Regional Engineering
Specialist EIT
1371 Rintop Dr.
Billings, Mt 59105
247-4423



FEMA's National Flood Insurance Program (NFIP) is about:

Lessening Flood Hardships



Roundup, MT. 2011. Photo credit Musselshell County

1. Floodplain Management:

Local communities manage development* and activities on floodplains through regulations, approved by FEMA and the State of Montana.

2. Flood Insurance: Individuals in participating NFIP communities purchase flood insurance from local insurance agents.

Flood Insurance:

Provide protection for property owners against potential losses.





.... Federally-backed Flood insurance is mandatory for building loans in FEMA-identified high risk flood areas, Special Flood Hazard Areas (SFHAs).



Lenders are required to give written notice of borrowers requirement to buy flood insurance.

There is usually a 30-day wait period for flood insurance.

For flood on Sept. 5, 2012
Insurance would have to been purchased by Aug. 5, 2012

30-Day Wait Exceptions



- At time home is purchased.
- When flooding is caused by wildfire on public land and purchased within 60 days of the fire.
 - i.e. Fire from Aug. 5-30.
 - Flooding on Sept. 5, flood insurance could be purchased on Sept. 6 and be effective.



You don't have to live in an SFHA or in an area mapped by FEMA to be eligible to purchase flood insurance. Any property owner or renter may purchase flood insurance provided their community participates in the NFIP.



In General

Flood Insurance for residential structures covers

1. Building, up to \$250,000
2. Contents, up to \$100,000

Flood insurance is available to renters and condominium owners.

Flood insurance for businesses

1. Building, up to \$500,000
2. Contents, up to \$500,000

Contact your local insurance agent for more details about flood insurance. Or find out more at www.floodsmart.gov

Flood Insurance does not cover damage to land or crops. For information regarding crop insurance visit your agricultural insurance agent or contact the USDA Farm Service Agency in your area.

National Flood Insurance Program

The Choice Is Yours...

WYO Companies Actively Writing
Flood Insurance

2009 – 2010



FEMA



The Write Your Own (WYO)
Program ...is a cooperative
undertaking of the insurance
industry and FEMA.

Local agents write flood insurance
policies. The cost of the exact
same coverage does not vary
with different agents.

Average Cost of Flood Insurance for 1 year in Montana...





DNRC File Photo West of
Helena, 1981

\$575.00

This figure can range significantly and is
based on 2012 data.

Maps and Insurance

Map Zones on
DFIRMs:
For insurance purposes,
It is either
High Risk
Or
Low to Moderate Risk,

The floodway
designation does not
affect the insurance
rating.

High Risk
Flood Insurance:
Zone A

**Low to Moderate
Risk**
Insurance:
Zones : B, C, or X
Eligible for PRP

LEGEND



SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.



FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
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OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

Flood Insurance

Preferred Risk Policy is low-cost flood insurance for properties in “Low to Moderate Risk” Zones: B, C, D, and X.

An exception: Preferred Risk Policies are also available in newly mapped High Risk Zone A, as a result of a change in the map which may occur when a map is converted from FIRM to DFIRM. This exception is only available for 2 years.





Reducing the Risk of Flooding Continues...

In 2012, Montana Silver Jackets Program was officially launched with the completion of the charter. Local and state agencies, the Federal Emergency Management Agency and the U.S. Army Corps of Engineers (USACE) have collaborated to create interagency teams to leverage information and resources, identify gaps between programs, improve public flood risk communication through a united effort with coordinated interagency messages, and to create a mechanism to collaboratively solve issues and implement initiatives.